

**Remarks by the Honorable Frederick Gregory  
NASA Deputy Administrator  
Software of the Year Awards  
NASA Headquarters  
Washington, D.C.  
September 6, 2005**

- Thanks Keith (Keith Hudkins, NASA Deputy Chief Engineer) for that gracious introduction.
- I am delighted to be here today to help honor the cream of NASA's software development crop.
- From a personal standpoint, I want to join with Keith in underscoring how important software is to what we do as an agency.
- Of course, NASA is primarily known by the outside world for our rockets and spacecraft.

- And it is said that during the Apollo era, the computing power in the spacecraft we flew to the moon was less than what we have in a typical laptop today.
- But think of where we would be today if NASA hadn't made a huge investment in computers and software when the space age was just under way, and not kept that investment up.
- As a member of three Space Shuttle crews, I benefited first hand from the latest in avionics.
- And while as a pilot I certainly would have liked more control when we brought the Shuttle down to a landing, it was enormously reassuring to know the Shuttle was being guided by software written by such high-caliber people—some of whom I suspect are in this room today.

- Today, in everything NASA is doing—whether it be operating the International Space Station, Hubble Space Telescope and Mars Exploration Rovers, bringing home an incredible amount of data through our system of Earth Observation Satellites, and preparing for the great exploration adventures to come as we implement the Vision for Space Exploration—world class software is just as important to our mission as is rockets and spacecraft.
- I’ve been a part of the NASA team for 31 years, and for 11 of those years we’ve been conducting this award competition.
- In my defense, I must say in those first 20 years no one gave me a vote on what awards we’d be able to give. Had they done so, I would have been in your corner.

- I am told that the Software of the Year award is the largest software award in the world, which gives you an indication of the Agency leadership's current recognition of the vital significance of innovation in software development.
- The award is based on criteria that emphasize the importance of quality software engineering, innovation, the extent of current and potential use, and significance to our mission programs, and overall science, technology and industry.
- This year 30 cases were submitted by NASA Centers, with seven selected as finalists.
- So you see, this competition is just as tough as American Idol!
- And I am pleased to recognize the work of two outstanding teams, one from the Goddard Space Flight Center, and one from the Jet Propulsion Laboratory.

- Both of these innovative software products attest to the powerful scientific gains that can be obtained when we couple our spacecraft and instruments with tremendously creative software products.
- I know from my experience in space that the human eye can see a great deal of detail while in orbit, and with the help of cameras, capture images of some of those details, such as the bright lights of great cities, and even the wakes of large ships traveling across the ocean.
- Now just think how much more valuable our Earth observing capabilities are with a tool like the Land Information System Software, version 4.0, developed by the Goddard Spaceflight Center team.
- By integrating parallel and distributed computing technologies with modern land surface modeling capabilities, this software promises to help revolutionize the nation's weather and climate forecasting systems.

- Let's consider for a moment the incredible value of our satellite-based weather forecasting capabilities. One of the untold stories of Hurricane Katrina is how helpful satellite imagery provided by NASA and our friends at NOAA was in alerting public officials of the need to begin evacuating New Orleans and southern Mississippi before Katrina made landfall on August 29. Countless lives were saved because of this public service.
- Similarly, the Autonomous Sciencecraft Experiment Software, developed at the Jet Propulsion Laboratory, enables spacecraft to autonomously detect and track dynamic scientific processes such as volcanic activity and flooding.
- This capability has been successfully used on the Earth Observing One Mission and is in development for use on the Mars Odyssey Mission and future missions directly tied to the Vision for Space Exploration.

- These two award winners are indeed blue ribbon projects that will dramatically increase scientific knowledge and show taxpayers that their investment in NASA is indeed an investment in our nation's future.
- I congratulate all of the award winners for your hard work, creativity, and dedication to our great Agency. And I thank our colleagues who helped manage this important awards process.